

REMARKS/ARGUMENTS

Favorable reconsideration of this application in view of the above amendments and following remarks is respectfully requested.

Claims 15-41 are pending in this application. By this amendment, Claims 15 and 16 are amended; Claims 29-41 are added; and no claims are canceled herewith. It is respectfully submitted that no new matter is added by this amendment.

In the outstanding Office Action Claim 16 was objected to; Claims 15, 16, 22-24, 26, 27 and 28 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 5,516,412 to Andricacos in view of U.S. Patent No. 5,486,272 to Hemsley and further in view of U.S. Patent No. 3,856,652 to Fleischmann; Claims 17 and 18 were rejected under 35 U.S.C. § 103(a) as unpatentable over Andricacos in view of Hemsley, and Fleischmann and further in view of U.S. Patent No. 6,547,951 to Maekawa; Claims 19 and 25 were rejected under 35 U.S.C. § 103(a) as unpatentable over Andricacos, Hemsley, Fleischmann and Maekawa and further in view of U.S. Patent No. 6,365,016 to Lacovangelo; Claim 20 was rejected under 35 U.S.C. § 103(a) as unpatentable over Andricacos in view of Hemsley and Fleischmann and further in view of U.S. Patent No. 5,980,706 to Bleck; and Claim 21 was rejected under 35 U.S.C. § 103(a) as unpatentable over Andricacos in view of Hemsley, Fleischmann and Bleck and further in view of U.S. Patent No. 7,087,144 to Herchen.

With respect to the objection to Claim 16, Claim 16 is amended by the present amendment. Accordingly, withdrawal of the objection of Claim 16 is respectfully requested.

With respect to the rejection of the claims under 35 U.S.C. § 103(a), those rejections are respectfully traversed.

In particular, the applied art does not teach, disclose or render obvious an electrolytic reactor for use in a process for electrolytically coating a part that includes a conical chamber open at two opposite ends, a support for the part to be coated placed in a wide end of the

chamber, an anode placed in a narrow end of the chamber, and means for circulating the electrolyte through the chamber from the narrow end to the wide end, with the chamber including stacked and removable slices and an armature for supporting and clamping the slices as recited in Claim 15, and similarly recited in Claim 29.

Instead, Andricacos discloses an electrolytic reactor for coating a part in a chamber filled with the electrolyte. Hemsley discloses an electrolytic reactor in which the electrolyte flows through an annular chamber defined by a cathode tube 60 and an anode tube 70 which are concentric, further the chamber comprises a conical inlet 97 flown from the narrow end to the wide end, see Figure 2. Fleischmann discloses an electrolytic reactor with an electrode in the middle of the chamber, which consists of an adjustable stack of rods.

According to the features of the claimed invention, a conical chamber is provided for a regular spreading of the electrolyte, which is adjustable in adding or removing slices, for matching the size of the part to be coated. The part is placed in the chamber, and the other electrode (the anode) is placed in the chamber too. However, in Hemsley, the electrodes are placed in the main, cylindrical part of the chamber, outside the conical inlet. As such, even though Hemsley discusses that a conical flow provides a more regular distribution of the electrolyte, Hemsley fails to all the recited features of the claimed invention. That is, one or more embodiments of the present application discloses that the flow regularity is best in the conical part itself, and lesser downstream. See at least page 3, line 31- page 4 line4 of the present specification.

Further Hemsley does not suggest to place the electrodes and the electrolysis as set forth in the claimed invention, which is having both electrodes present in the conical chamber, the cathode downstream of the anode 11. Moreover, it is respectfully submitted that there is no basis in the teachings of either Hemsley or Andricacos to support their applied combination. Certainly, the outstanding Office Action fails to cite to any specific teachings

within either reference to support the applied combination. A combination of Hemsley with Andricacos would consist of replacing the inlet manifolds 58, 60 and 62 for the electrolyte in Andricacos with conical inlets similar to Hemsley at the bottom of Andricacos' chamber, without necessarily changing the shape of this chamber. Further, a regulation of the flow through the chamber according to Hemsley's teaching would likely not lead to a uniform coating in Andricacos, in which the wafer to be coated is hung laterally in the chamber and no symmetry with respect to a central axis of the flow is present. Andricacos rather relies on a paddle for replacing and circulating the electrolyte in front of the wafer, which is in agreement to another idea of the prior art from which the invention departs, see page 2, lines 29-31 in the present application. Accordingly, it is respectfully submitted that the combination of Hemsley with Andricacos is the result of hindsight reconstruction in view of the teachings of the present specification, and is improper.

In Fleischmann, while an electrode consists of stacked removable elements, the chamber does not. As such, Fleischmann fails to suggest a chamber having an adjustable size according to the part to be coated. Fleischmann is concerned with processes in which no solid part is to be coated, but the liquid flowing through undergoes the chemical reaction (col. 1, lines 31-35).

Accordingly, withdrawal of the rejection of the claims under 35 U.S.C. § 103 is respectfully requested.

Consequently, for the reasons discussed in detail above, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal allowance. Therefore, a Notice of Allowance is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact the undersigned representative at the below listed telephone number.

Respectfully submitted,

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